# UNITED STATES PATENT AND TRADEMARK OFFICE

| APPLICATION NO. | FILING DATE | FIRST NAMED INVENTOR | ATTORNEY DOCKET NO. | CONFIRMATION NO. |
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| 09/753,728 | 01/03/2001 | Makoto Araki | 1232-4672 | 3779 |

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| EXAMINER |
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| ART UNIT | PAPER NUMBER |
|---|---|
| 3623 | |

DATE MAILED: 09/09/2005

Please find below and/or attached an Office communication concerning this application or proceeding.

PTO-90C (Rev. 10/03)

| | | Application No. | Applicant(s) |
|---|---|---|---|
| **Office Action Summary** | | 09/753,728 | ARAKI ET AL. |
| | | Examiner | Art Unit | |
| | | Susanna M. Diaz | 3623 | |

*-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --*

## Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE _3_ MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

## Status

1)☒ Responsive to communication(s) filed on _21 June 2005_.

2a)☒ This action is **FINAL.**   2b)☐ This action is non-final.

3)☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

## Disposition of Claims

4)☒ Claim(s) _1-89_ is/are pending in the application.

   4a) Of the above claim(s) _5,19,27,41 and 49-87_ is/are withdrawn from consideration.

5)☐ Claim(s) _____ is/are allowed.

6)☒ Claim(s) _1-4,6-18,20-26,28-40,42-48,88 and 89_ is/are rejected.

7)☐ Claim(s) _____ is/are objected to.

8)☐ Claim(s) _____ are subject to restriction and/or election requirement.

## Application Papers

9)☐ The specification is objected to by the Examiner.

10)☒ The drawing(s) filed on _6/21/05_ is/are: a)☒ accepted or b)☐ objected to by the Examiner.

   Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).

   Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).

11)☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

## Priority under 35 U.S.C. § 119

12)☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).

   a)☐ All   b)☐ Some *  c)☒ None of:

   1.☒ Certified copies of the priority documents have been received.

   2.☐ Certified copies of the priority documents have been received in Application No. _____.

   3.☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

   * See the attached detailed Office action for a list of the certified copies not received.

## Attachment(s)

1)☐ Notice of References Cited (PTO-892)

2)☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)

3)☒ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08) Paper No(s)/Mail Date _5/2/05_.

4)☐ Interview Summary (PTO-413) Paper No(s)/Mail Date. _____ .

5)☐ Notice of Informal Patent Application (PTO-152)

6)☐ Other: _____ .

U.S. Patent and Trademark Office

PTOL-326 (Rev. 1-04)       Office Action Summary       Part of Paper No./Mail Date 09032005

## DETAILED ACTION

1.      This final Office action is responsive to Applicant's amendment filed June 21,

2005.

 Claims 1-4, 6-18, 20, 22-26, 28-40, 42, 44-48, 88, and 89 have been amended.

 Claims 5, 19, 27, 41, and 49-87 stand as withdrawn.

 Claims 1-4, 6-18, 20-26, 28-40, 42-48, 88, and 89 are presented for examination.


2.      The objection to the specification is withdrawn in response to Applicant's

submission of a corrected abstract.

 The claim objection is withdrawn in response to Applicant's amendment of claim

48.

 . The rejection of claim 44 under 35 U.S.C. § 101 is withdrawn in response to

Applicant's amendment of claim 44.

 The Examiner acknowledges receipt of the Applicant's postcard receipt listing the

priority documents; however, the Examiner requested that these documents be

scanned. In response to this request, the paper file of the instant application was

accessed; however, the Examiner was informed that no priority documents were found

with the paper file. The Examiner apologizes for this inconvenience and requests that

Applicant please submit another copy of the priority documents.

 The rejections under 35 U.S.C. § 112 are withdrawn in response to Applicant's

arguments and claim amendments; however, new rejections are applied below.

### Response to Arguments

3.      Applicant's arguments filed June 21, 2005 have been fully considered but they

are not persuasive.

Applicant argues that claims 23-26, 28-40, 42, and 43 are statutory because they

produce a useful, concrete, and tangible result (pages 28-29). The Examiner agrees

that these claims produce a useful, concrete, and tangible result; however, these claims

remain non-statutory for failure to sufficiently incorporate the technological arts.

Applicant has not addressed the technological arts requirement.

### Priority

4.      Acknowledgment is made of applicant's claim for foreign priority based on an

application filed in Japan on January 6, 2000 and another application filed in Japan on

October 26, 2000. It is noted, however, that applicant has not filed a certified copy of

either application as required by 35 U.S.C. 119(b).

### Claim Objections

5.      Claim 44 is objected to under 37 CFR 1.75(c), as being of improper dependent

form for failing to further limit the subject matter of a previous claim. Applicant is

required to cancel the claim(s), or amend the claim(s) to place the claim(s) in proper

dependent form, or rewrite the claim(s) in independent form. One can infringe on claim

44 without necessarily infringing on independent claim 23, which is improper.

## Claim Rejections - 35 USC § 112

6.      The following is a quotation of the second paragraph of 35 U.S.C. 112:

> The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.

7.      Claims 1-4, 6-18, 20, 21, 23-26, 28-40, 42-48, 88, and 89 are rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention.

Independent claims 1, 23, and 44 have been amended to recite "work units as work standards as the composition targets." This implies that the three terms (work units, work standards, and composition targets) are equivalents, thereby making this recitation of all three terms redundant. It is not clear if Applicant meant to further limit work units based on work standards, further limited by composition targets because the intended scope of each of these terms is ambiguous, thereby rendering the claims vague and indefinite.

Additionally, dependent claims 45-48 further define "work standards"; however, these definitions are contrary to the understanding of a work unit or composition target, thereby conflicting with independent claim 1.

Appropriate correction is required.

## Claim Rejections - 35 USC § 101

8.      35 U.S.C. 101 reads as follows:

> Whoever invents or discovers any new and useful process, machine, manufacture, or composition of matter, or any new and useful improvement thereof, may obtain a patent therefor, subject to the conditions and requirements of this title.

9.      Claims 23-26, 28-40, 42, and 43 are rejected under 35 U.S.C. 101 because the claimed invention is directed to non-statutory subject matter.

The basis of this rejection is set forth in a two-prong test of:

(1) whether the invention is within the technological arts; and

(2) whether the invention produces a useful, concrete, and tangible result.

For a claimed invention to be statutory, the claimed invention must be within the technological arts. Mere ideas in the abstract (i.e., abstract idea, law of nature, natural phenomena) that do not apply, involve, use, or advance the technological arts fail to promote the "progress of science and the useful arts" (i.e., the physical sciences as opposed to social sciences, for example) and therefore are found to be non-statutory subject matter. For a process claim to pass muster, the recited process must somehow apply, involve, use, or advance the technological arts.

Mere intended or nominal use of a component, albeit within the technological arts, does not confer statutory subject matter to an otherwise abstract idea if the component does not apply, involve, use, or advance the underlying process.

In the present case, while claims 23-26, 28-40, 42, and 43 recite a useful, concrete, and tangible result, they are not limited to the technological arts. The display of data is, at best, a nominal recitation of technology (assuming that the display is an electronic display, which is not expressly recited). Technology must effect a core step of the invention, such as a calculation or analysis step.

Appropriate correction is required.

*Because claims 45-48 are so indefinite, no art rejection is warranted as*

*substantial guesswork would be involved in determining the scope and content of these*

*claims. See In re Steele, 305 F.2d 859, 134 USPQ 292 (CCPA 1962); Ex parte*

*Brummer, 12 USPQ 2d, 1653, 1655 (BdPatApp&Int 1989); and also In re Wilson, 424*

*F.2d 1382, 165 USPQ 494 (CCPA 1970). Prior art pertinent to the disclosed invention*

*is nevertheless cited (please see Yuri, in particular) and applicants are reminded they*

*must consider all cited art under Rule 111(c) when amending the claims to conform with*

*35 U.S.C. § 112. The art rejection of the other pending claims reflects Examiner's best*

*understanding of the claimed invention.*

### Claim Rejections - 35 USC § 102

10.     The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that

form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(e) the invention was described in (1) an application for patent, published under section 122(b), by another filed in the United States before the invention by the applicant for patent or (2) a patent granted on an application for patent by another filed in the United States before the invention by the applicant for patent, except that an international application filed under the treaty defined in section 351(a) shall have the effects for purposes of this subsection of an application filed in the United States only if the international application designated the United States and was published under Article 21(2) of such treaty in the English language.

11.     Claims 1, 2, 4, 8-14, 16, 21, 23, 24, 26, 30-36, 38, 43, and 44 are rejected under

35 U.S.C. 102(e) as being anticipated by Yuri et al. (U.S. Patent No. 6,249,715).

Yuri discloses a work assignment system for assigning and composing a work

formed from a plurality of work units to a plurality of stations, comprising:

[Claim 1]     display means for displaying names of the plurality of work units as work

standards as the composition targets (Figs. 1, 11, 13-15; col. 13, line 37 through col. 14,

line 63);

        condition input means for inputting a user-selected manufacturing condition (col.

10, lines 23-61);

        assignment means for dividing the plurality of work units in accordance with the

user-selected manufacturing condition and assigning one group of the divided work

units to a station (Figs. 1, 11, 13-15; col. 13, line 37 through col. 14, line 63); and

        output means for outputting an assignment result of the work units of each

station to a work assignment file as a composition plan (Figs. 1, 11, 13-15; col. 13, line

37 through col. 14, line 63);

[Claim 2]     wherein said output means displays the names of the work units assigned

to each station in units of stations (Figs. 1, 11, 13-15; col. 13, line 37 through col. 14,

line 63);

[Claim 4]     wherein each of the plurality of work units as the work standards as the

composition targets has manhour value data, and said system further comprises

calculation means for calculating a total manhour of the plurality of work units, and

means for entering a value of the total manhour calculated by said calculation means as

partial data of the user-selected manufacturing condition (Figs. 11, 13-15; col. 13, line

37 through col. 14, line 63);

[Claim 8]     wherein said assignment means comprises user interface means for

attaching information representing parallel operation of works to the plurality of work

units as the work standards as the composition targets, and makes a plurality of

composition plans in consideration of the attached parallel operation and sends the

composition plans to said output means (Figs. 1, 11, 13-15; col. 10, line 62 through col.

14, line 63);

[Claim 9]      wherein said output means visually displays and outputs the total manhour

of the work units of each station (Figs. 1, 11, 13-15; col. 13, line 37 through col. 14, line

63);

[Claim 10]      wherein said output means displays the total manhour of the work units of

each station in a form of a bar graph (Figs. 9, 10, 12, 13, 15; col. 14, lines 56-63);

[Claim 11]      wherein a window of said display means is divided into a first display area

and a second display area, and said output means displays the bar graph of the total

manhour of the work units of each station in the first display area and the work units

belonging to the station in the second display area in units of stations, the stations in the

first display area and those in the second display area being correspondingly displayed

(Figs. 9, 10, 12, 13, 15; col. 14, lines 56-63);

[Claim 12]      wherein said output means correspondingly displays the bar graph of the

total manhour of the work units of each station and the work units belonging to the

station (Figs. 9, 10, 12, 13, 15; col. 14, lines 56-63);

[Claim 13]      wherein the assignment result is displayed as the bar graph of the total

manhour in units of stations (Figs. 9, 10, 12, 13, 15; col. 14, lines 56-63);

[Claim 14]      wherein the assignment result is displayed as a list of work units put

together in units of stations and belonging to each station (Figs. 9, 10, 12, 13, 15; col.

14, lines 56-63);

[Claim 16]      wherein correction of a station is executed by

deleting the station (Figs. 11, 13-15; col. 11, lines 41-67; col. 13, line 37 through

col. 14, line 63; col. 15, lines 29-67 – Element work can be redistributed among work

stations),

adding a new station (Figs. 11, 13-15; col. 11, lines 41-67; col. 13, line 37

through col. 14, line 63; col. 15, lines 29-67 – Element work can be redistributed among

work stations),

exchanging an arbitrary work standard in the station with an arbitrary work

standard in another station (Figs. 11, 13-15; col. 11, lines 41-67; col. 13, line 37 through

col. 14, line 63; col. 15, lines 29-67 – Element work can be redistributed among work

stations),

adding an arbitrary work standard to an arbitrary work standard in the station, or

dividing a work standard belonging to the station into two stations (Figs. 11, 13-15; col.

11, lines 41-67; col. 13, line 37 through col. 14, line 63; col. 15, lines 29-67 – Element

work can be redistributed among work stations);

[Claim 21]      wherein said system further comprises a database containing information

related to a skill or experience of an operator, and said output means extracts the

information related to the skill or experience of operators assigned in units of stations

and displays the information together on a display window of said display means (Figs.

9, 10, 12, 13, 15, 20; col. 7, lines 49-62; col. 14, lines 56-63).


[Claims 23, 24, 26, 30-36, 38, 43]        Claims 23, 24, 26, 30-36, 38, and 43 recite

limitations already addressed by the rejection of claims 1, 2, 4, 8-14, 16, and 21 above;

therefore, the same rejection applies.

[Claim 44]     Claim 44 recites limitations already addressed by the rejection of claim 1

above; therefore, the same rejection applies.


## *Claim Rejections - 35 USC § 103*

12.     The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all

obviousness rejections set forth in this Office action:

> (a) A patent may not be obtained though the invention is not identically disclosed or described as set
> forth in section 102 of this title, if the differences between the subject matter sought to be patented and
> the prior art are such that the subject matter as a whole would have been obvious at the time the
> invention was made to a person having ordinary skill in the art to which said subject matter pertains.
> Patentability shall not be negatived by the manner in which the invention was made.

13.     Claims 3, 6, 7, 15, 17, 18, 20, 22, 25, 28, 29, 37, 39, 40, 42, 88, and 89 are

rejected under 35 U.S.C. 103(a) as being unpatentable over Yuri et al. (U.S. Patent No.

6,249,715), as applied to claims 1, 2, 10, 23, 24, and 32 above.

[Claims 3, 88]        Regarding claims 3 and 88, Yuri's user (i.e., the system operator)

inputs data concerning each worker (col. 10, lines 23-61). Yuri's user does not

expressly select an average value of manhours necessary to execute all the work units

in the station; however, an operation time value T per worker is calculated (col. 11, lines

44-45) and, later, total manhours required for every area are determined (col. 12, lines

20-46). A total operation time value T per worker must be based on some quantitative estimates and/or observations. Official Notice is taken that it is old and well-known in the art of workforce management to use an average of historical operation time values to estimate an expected operation time value that a worker will spend on a given task. An average typically lends itself to good estimates for a general population of workers. Therefore, the Examiner submits that it would have been obvious to one of ordinary skill in the art at the time of Applicant's invention to allow Yuri's user to select a manufacturing condition that is an average value of manhours necessary to execute all the work units in the station in order to generate simulations that are fairly accurate for a general population of workers.

[Claims 6, 7]      As per claims 6 and 7, Yuri discloses means for displaying an arbitrary work unit group (Figs. 11, 13-15; col. 13, line 37 through col. 14, line 63), wherein the arbitrary work unit group is classified into one of a component group formed from a plurality of work units, a model group formed from a plurality of components, a representative model group formed from a plurality of models, and a genre group formed from a plurality of representative models (Figs. 1, 11, 13-15; col. 10, line 62 through col. 14, line 63). Yuri does not expressly disclose a user interface means for selecting one or more work units from the displayed work unit group. Instead, Yuri's users manipulate simulation data via an input means used to update worker and product databases (col. 10, lines 23-32). Official Notice is taken that it is old and well-known in the art to allow users to alter simulation constraints via a user interface means that allows for selection of simulation parameters to be changed. This interface allows

users to quickly and conveniently alter simulation parameters to facilitate decision

making. Since Yuri's invention enables simulation and updating of the parameters

thereof, the Examiner submits that it would have been obvious to one of ordinary skill in

the art at the time of Applicant's invention to modify Yuri to include a user interface

means for selecting one or more work units from the displayed work unit group in order

to allow users to quickly and conveniently alter simulation parameters to facilitate

decision making.

[Claims 15, 17]      Yuri discloses that work may be assigned by deleting the station,

adding a new station, exchanging an arbitrary work standard in the station with an

arbitrary work standard in another station, adding an arbitrary work standard to an

arbitrary work standard in the station, or dividing a work standard belonging to the

station into two stations (Figs. 11, 13-15; col. 11, lines 41-67; col. 13, line 37 through

col. 14, line 63; col. 15, lines 29-67 – Element work can be redistributed among work

stations). Yuri also discloses the generation of bar graphs to represent work allocation

(Figs. 9, 10, 12, 13, 15; col. 14, lines 56-63). Yuri does not expressly disclose a user

interface means for direct corrections and editing of the assignment output. Instead,

Yuri's users manipulate simulation data via an input means used to update worker and

product databases (col. 10, lines 23-32). Official Notice is taken that it is old and well-

known in the art to allow users to alter simulation constraints via a user interface means

that allows for selection of simulation parameters to be changed. This interface allows

users to quickly and conveniently alter simulation parameters to facilitate decision

making. Since Yuri's invention enables simulation and updating of the parameters

thereof, the Examiner submits that it would have been obvious to one of ordinary skill in

the art at the time of Applicant's invention to modify Yuri to include user interface means

for providing a user interface for further correcting the assignment result output by said

output means in units of stations, means for receiving editing information input by said

user interface means and correcting the assignment result, wherein correction of a

station is executed and correcting a length of a bar graph of the station related to the

correction in accordance with a correction unit in order to allow users to quickly and

conveniently alter simulation parameters to facilitate decision making.

[Claim 18]    Yuri does not expressly disclose the authentication of a user, yet Yuri

states, "the phrase 'system operator' does not mean a worker who only handles a

system, but rather, a chief engineering staff, line leader or the like in the field" (col. 10,

lines 56-59). Clearly, Yuri's users are meant to be specific people in charge of work

assignment as opposed to any random user. Official Notice is taken that it is old and

well-known in the art of security to authenticate system users in order to protect the

integrity of software and data being accessed. Therefore, since Yuri's users are a

limited set of workers, the Examiner submits that it would have been obvious to one of

ordinary skill in the art at the time of Applicant's invention to incorporate with Yuri a user

interface means for displaying a window for authenticating a user of the work

assignment system in order to protect the integrity of software and data being accessed.

[Claim 20]    Yuri discloses that said output means displays a total manhour of the work

units of each station in a form of a bar graph in units of stations, and for a bar graph of a

station including a work standard having a manhour larger than the average manhour

value, a height of the bar graph is increased to limit a height of the bar graph (Figs. 9,

10, 12, 13, 15; col. 14, lines 56-63 – By definition, the height of a bar graph is limited by

the height of the bar graph).

[Claim 22]    Claim 22 recites limitations already addressed by the rejection of claim 1

above; therefore, the same rejection applies.  Furthermore, Yuri teaches a single work

distribution simulator (Fig. 1), yet Yuri does not expressly teach a server-client

environment (i.e., with multiple clients).  However, Official Notice is taken that server-

client environments with multiple clients are old and well-known in the art.  It is also old

and well-known to control manufacturing operations using a server with multiple-clients,

especially when manufacturing operations are distributed throughout various locations.

Therefore, the Examiner asserts that it would have been obvious to one of ordinary skill

in the art at the time of Applicant's invention to modify Yuri to function in a server

environment with multiple clients in order to facilitate the allocation of work in a

distributed manufacturing environment (i.e., in which workstations are remotely located).


[Claims 25, 28, 29, 37, 39, 40, 42, 89]    Claims 25, 28, 29, 37, 39, 40, 42, and 89 recite

limitations already addressed by the rejection of claims 3, 6, 7, 15, 17, 18, 20, and 88

above; therefore, the same rejection applies.


### Conclusion

14.    Applicant's amendment necessitated the new ground(s) of rejection presented in

this Office action.  Accordingly, **THIS ACTION IS MADE FINAL**.  See MPEP

§ 706.07(a).  Applicant is reminded of the extension of time policy as set forth in 37

CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire THREE

MONTHS from the mailing date of this action.  In the event a first reply is filed within

TWO MONTHS of the mailing date of this final action and the advisory action is not

mailed until after the end of the THREE-MONTH shortened statutory period, then the

shortened statutory period will expire on the date the advisory action is mailed, and any

extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of

the advisory action.  In no event, however, will the statutory period for reply expire later

than SIX MONTHS from the date of this final action.


15.    Any inquiry concerning this communication or earlier communications from the

examiner should be directed to Susanna M. Diaz whose telephone number is (571) 272-

6733.  The examiner can normally be reached on Monday-Friday, 10 am - 6 pm.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's

supervisor, Tariq Hafiz can be reached on (571) 272-6729.  The fax phone number for

the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the

Patent Application Information Retrieval (PAIR) system. Status information for

published applications may be obtained from either Private PAIR or Public PAIR.

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you have questions on access to the Private PAIR system, contact the Electronic

Business Center (EBC) at 866-217-9197 (toll-free).

Susanna M. Diaz
Primary Examiner
Art Unit 3623

September 6, 2005